

## A B S T R A C T

A processing apparatus includes a vessel (1) which accommodates a target object (W), ultraviolet light-generating means (41) for outputting ultraviolet light (UV) toward an atmosphere (P) containing radicals  
5 in the vessel (1), ultraviolet light-receiving means (42) for receiving the ultraviolet light (UV) passing through the atmosphere (P), and analysis control means (43, 44) for obtaining a density of the radicals in the atmosphere (P) on the basis of an output signal from the  
10 ultraviolet light-receiving means (42), to control a process parameter. The density of the radicals can be held at a constant level, and process reproducibility can be improved.